

## Hal Abelson - Vita

Harold (Hal) Abelson is Class of 1922 Professor Of Electrical Engineering and Computer Science at MIT and a Fellow of the IEEE. He received the A.B. degree, summa cum laude, from Princeton University in 1969. In 1973, he received the Ph.D. degree in mathematics from MIT and joined the MIT faculty with a joint appointment in the mathematics department and the Division for Study and Research in Education. He joined Department of Electrical Engineering and Computer Science in 1977.

In 1992, Abelson was designated as one of MIT's six inaugural MacVicar Faculty Fellows, in recognition of his significant and sustained contributions to teaching and undergraduate education. Abelson was recipient in 1992 of the Bose Award (MIT's School of Engineering teaching award). Abelson is also the winner of the 1995 Taylor L. Booth Education Award given by IEEE Computer Society, cited for his continued contributions to the pedagogy and teaching of introductory computer science. He has been a regular consultant at Hewlett-Packard Laboratories since 1995, where he works on Internet technologies and electronic publishing.

Abelson has a longstanding interest in using computation as a conceptual framework in teaching. He directed the first implementation of Logo for the Apple II, which made the language widely available on personal computers beginning in 1981; and published a widely selling book on Logo in 1982. Together with Gerald Sussman, Abelson developed MIT's introductory computer science subject, "Structure and Interpretation of Computer Programs," a subject organized around the notion that a computer language is primarily a formal medium for expressing ideas about methodology, rather than just a way to get a computer to perform operations. This work, through Abelson and Sussman's popular computer science, videotapes of their lectures, and the availability on personal computers of the Scheme dialect of Lisp (used in teaching the course), has had a world-wide impact on university computer-science education.

Abelson and Sussman also cooperate in codirecting the MIT Project on Mathematics and Computation, a joint project of the MIT Artificial Intelligence Laboratory and the MIT Laboratory for Computer Science, whose goal is to create better computational tools for scientists and engineers. But even with powerful numerical computers, exploring complex physical systems still requires substantial human effort and human judgement to prepare simulations and to interpret numerical results. Together their students, Abelson and Sussman are combining techniques from numerical computing, symbolic algebra, and heuristic programming to develop programs that not only perform massive numerical computations, but that also interpret these computations and "discuss" the results in qualitative terms. Programs such as these could form the basis for intelligent scientific instruments that monitor physical systems based upon high-level behavioral descriptions. More generally, they could lead to a new generation of computational tools that can autonomously explore complex physical systems, and which will play an important part in the future practice of science and engineering. At the same time, these programs incorporate computational formulations of scientific knowledge that can form the foundations of better ways to teach science and engineering.

**EXHIBIT**

ABELSON  
JLH 7/5/00

Leon P. Gold (LG-1434)  
William M. Hart (WH-1604)  
PROSKAUER ROSE LLP  
1585 Broadway  
New York, New York 10036  
(212) 969-3000 Telephone  
(212) 969-2900 Facsimile

Jon A. Baumgarten  
PROSKAUER ROSE LLP  
1233 20th Street, N.W., Suite 800  
Washington, DC 20036-2396  
(202) 416-6800 Telephone  
(202) 416-6899 Facsimile

Attorneys for Plaintiffs

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

UNIVERSAL CITY STUDIOS, INC.; ) 00 Civ. 277 (LAK)(RLE)  
PARAMOUNT PICTURES CORPORATION; )  
METRO-GOLDWYN-MAYER STUDIOS INC.; )  
TRISTAR PICTURES, INC.; COLUMBIA )  
PICTURES INDUSTRIES, INC.; TIME WARNER )  
ENTERTAINMENT CO., L.P.; DISNEY )  
ENTERPRISES, INC.; AND TWENTIETH ) NOTICE OF DEPOSITION  
CENTURY FOX FILM CORPORATION, )  
)

Plaintiffs, )  
)

v. )  
)

SHAWN C. REIMERDES; ERIC CORLEY A/K/A )  
"EMMANUEL GOLDSTEIN"; ROMAN KAZAN, )  
AND 2600 ENTERPRISES, INC., )  
)

Defendants. )  
)

**EXHIBIT**

AV

1/22/01  
4/4 7/5/00

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PLEASE TAKE NOTICE that, pursuant to Federal Rules of Civil Procedure 30 and 45, on July 5, 2000, beginning at 10:00 a.m., plaintiffs shall take the deposition by oral examination of Harold Abelson at the offices of Proskauer Rose LLP, 1585 Broadway, New York, New York. The deposition will be recorded by videotape and by stenographic means, and will take place before a notary public or other officer authorized to administer oaths. The deposition will continue from day to day as necessary until completed. You are invited to attend and cross-examine.

PLEASE TAKE FURTHER NOTICE that, pursuant to Rule 45 of the Federal Rules of Civil Procedure, plaintiffs have commanded Harold Abelson to produce at the offices of Proskauer Rose LLP, 1585 Broadway, New York, New York 10036, on June 26, 2000, at 10:00 a.m., the documents in his possession, custody or control described in the subpoena, a copy of which is annexed hereto.

DATED: June 15, 2000

PROSKAUER ROSE LLP

By: \_\_\_\_\_

Leon P. Gold (LG-1434)  
William M. Hart (WH-1604)  
1585 Broadway  
New York, New York 10036  
(212) 969-3000 Telephone  
(212) 969-2900 Facsimile

- and -

Jon A. Baumgarten  
PROSKAUER ROSE LLP  
1233 20th Street, N.W., Suite 800  
Washington, DC 20036-2396  
(202) 416-6800 Telephone  
(202) 416-6899 Facsimile

Attorneys for Plaintiffs

To: Martin Garbus, Esq.  
Edward Hernstadt, Esq.  
FRANKFURT, GARBUS, KLEIN &  
SELZ, P.C.  
488 Madison Avenue  
New York, New York 10022  
(212) 980-0120 Telephone  
(212) 593-9175 Facsimile

Attorneys for Defendants Eric Corley a/k/a  
Emmanuel Goldstein and 2600 Enterprises, Inc.  
a/k/a 2600 Magazine

Issued by the  
**UNITED STATES DISTRICT COURT**

**SOUTHERN**

**DISTRICT OF**

**NEW YORK**

UNIVERSAL CITY STUDIOS, INC., et al.,

Plaintiffs,

**V.**

SHAWN C. REIMERDES, et al.,

Defendants.

**SUBPOENA IN A CIVIL CASE**

CASE NUMBER: <sup>1</sup> 00 Civ. 0277 (LAK)

TO: Harold Abelson  
c/o Frankfurt Garbus Klein & Selz, PC  
488 Madison Avenue  
New York, New York 10022

☐ YOU ARE COMMANDED to appear in the United States District Court at the place, date, and time specified below to testify in the above case.

PLACE OF TESTIMONY

COURTROOM

DATE AND TIME

☒ YOU ARE COMMANDED to appear at the place, date, and time specified below to testify at the taking of a deposition in the above case.

PLACE OF DEPOSITION

Proskauer Rose, LLP  
1585 Broadway, New York, New York 10036

DATE AND TIME

July 5, 2000  
10:00 a.m.

☒ YOU ARE COMMANDED to produce and permit inspection and copying of the following documents or objects at the place, date, and time specified below (list documents or objects):

See Schedule A attached.

PLACE

Proskauer Rose LLP  
1585 Broadway, New York, New York 10036

DATE AND TIME

June 26, 2000  
10:00 a.m.

☐ YOU ARE COMMANDED to permit inspection of the following premises at the date and time specified below.

PREMISES

DATE AND TIME

Any organization not a party to this suit that is subpoenaed for the taking of a deposition shall designate one or more officers, directors, or managing agents, or other persons who consent to testify on its behalf, and may set forth, for each person designated, the matters on which the person will testify. Federal Rules of Civil Procedure, 30(b)(6).

ISSUING OFFICER SIGNATURE AND TITLE (INDICATE IF ATTORNEY FOR PLAINTIFF OR DEFENDANT)

Attorney for Plaintiffs

DATE

June 15, 2000

ISSUING OFFICER'S NAME, ADDRESS AND PHONE NUMBER

William H. Hart, Esq., (212) 969-3095  
Proskauer Rose LLP, 1585 Broadway, New York, New York 10036

(See Rule 45, Federal Rules of Civil Procedure, Parts C & D on Reverse)

<sup>1</sup> If action is pending in district other than district of issuance, state district under case number.

## **SCHEDULE A**

### **DEFINITIONS**

- A. Southern District of New York Local Civil Rule 26.3 governing Uniform Definitions in Discovery Requests is incorporated herein by reference, and all terms used herein shall be defined as set forth and construed therein, except where otherwise expressly indicated.
- B. "2600" shall mean the defendant, 2600 Enterprises, Inc. a/k/a "2600 Magazine," its predecessors and successors, its present or former officers, employees, directors, representatives, agents, attorneys and assigns, and its affiliates, subsidiaries, parent or controlling corporations and their affiliates and subsidiaries, or any entity through which it conducts business, either alone or jointly with others.
- C. The "2600.com Site" shall refer to the web site operated by Defendants at <http://www.2600.com>, or any other site owned or operated by the Defendants, including all subdirectories and all pages and files presently or previously available for viewing or download at the site.
- D. The "2600 Organizations" shall refer to any and all organizations of "hackers," other than Defendants, adopting the word "2600" as part of their name.
- E. "2600, The Hacker Quarterly" shall refer to the print magazine published by Defendants.
- F. "Communicate," "communicated," or "communication" means any act or instance of transferring, transmitting, passing, delivering or giving information, in the form of facts, ideas, inquiries, or otherwise, by oral, written, electronic, or any other means.



- G. The "**Connecticut Action**" shall refer to the action entitled *Universal City Studios, Inc., et al. v. Hughes*, filed in the United States District Court for the District of Connecticut on January 14, 2000, Case Number 300CV72 RNC.
- H. "**Corley**" shall mean the defendant, Eric Corley a/k/a "Emmanuel Goldstein".
- I. "**CSS**" shall mean the proprietary copy protection and access control system developed by Matsushita Electric Industrial Co., Ltd. and Toshiba Corporation, known as the Contents Scramble System.
- J. "**DeCSS**" shall mean the DVD decryption utility commonly known as DeCSS which has the purpose and function of circumventing CSS or the protection afforded by CSS, and shall include both the compiled object code and source code of DeCSS.
- K. "**Defendants**" shall mean Eric Corley a/k/a "Emmanuel Goldstein" ("Corley") and 2600 Enterprises, Inc. a/k/a "2600 Magazine" ("2600"), as defined herein.
- L. The term "**document**" is used herein in the broadest possible sense and shall mean any written, graphic or other recorded (whether visually, electronically, magnetically or otherwise) matter of whatever kind or nature or any other means of preserving thought or expression and all tangible things from which information can be processed, transcribed or retrieved, whether originals, copies or drafts (including, without limitation, nonidentical copies), however produced or reproduced (including but not limited to audiotapes, videotapes, CD-ROMs, e-mails, and computer files). A document with handwritten, typewritten or other recorded notes, editing marks, etc., is not and shall not be deemed identical to one without such modifications, additions, or deletions. The term "original" includes the file copy or copies of any document if there is no actual original or

ribbon copy. Designated documents shall mean originals in each instance (or copies thereof if originals are unavailable), regardless of origin or location, which are in your possession, custody, or control, or in the possession, custody, or control of your agents, representatives, employees, or counsel, and any copies or reproductions that differ in any respect from the original, such as copies containing marginal notations or other variations. Designated documents are to be taken as including all attachments, exhibits, enclosures, appendices and other documents that relate to or refer to such designated documents. The enumeration of various specific items as included within the definition of the word "document" shall not be taken to limit the generality of this word, and the requests herein are directed and intended to obtain all "documents" in the broadest and most comprehensive sense and meaning of this word.

- M. "Hyperlink" shall mean software instructions which, when executed, cause a signal to be sent to another location where data or material can be retrieved for viewing, copying or further transmission.
- N. "Motion Pictures" shall mean any cinematographic works released on DVD in which Plaintiffs hold a copyright interest.
- O. The "MPAA" shall mean the Motion Picture Association of America and any of its members, including each of the Plaintiffs.
- P. The "Norway Action" shall mean any investigation, criminal prosecution or civil action commenced or contemplated by the government of Norway concerning CSS, DeCSS, or any efforts to circumvent the encryption of DVDs.



- Q. "Person" or "persons" shall mean individuals, corporations, proprietorships, partnerships, firms, associations, joint ventures, banks, any government or governmental bodies, commissions, boards or agencies, and all other legal entities, and if appropriate or indicated, divisions, subsidiaries or departments of corporations or other entities, and their principals, agents, representatives, officers or employees.
- R. "Plaintiffs" shall mean Universal City Studios, Inc.; Paramount Pictures Corporation; Metro-Goldwyn-Mayer Studios Inc.; TriStar Pictures, Inc.; Columbia Pictures Industries, Inc.; Time Warner Entertainment Co., L.P.; Disney Enterprises, Inc.; and Twentieth Century Fox Film Corporation, and shall include their agents, representatives, attorneys, and all persons acting on their behalf.
- S. The "Santa Clara Action" shall refer to the action entitled *DVD Copy Control Association, Inc. v. McLaughlin, et al.*, filed in the Superior Court of California, Santa Clara County, on December 27, 1999, Case Number CV 786804.
- T. The "Declaration" shall refer to the Declaration of Harold Abelson In Opposition to Plaintiffs' Motion To Modify the Preliminary Injunction And In Support of Defendants' Cross-Motion To Vacate the Preliminary Injunction, dated April 26, 2000.

### INSTRUCTIONS

- A. You shall respond to each of the following requests in full to the best of your ability and shall specify which documents and things are responsive to each individual request.
- B. Documents shall be provided in the form in which they are normally kept. All documents that consist of or contain information in electronic or digital form, however, shall

be provided on one or more 3.5-inch floppy disks, digital audio tapes ("DATs"), Zip or Jazz cartridges, DVDs, or CD-ROMs unless agreed otherwise.

C. If any responsive document is withheld under a claim of privilege, or for any other reason, you are requested to provide the information set forth in FRCP 26(b)(5) and Southern District of New York Local Rule 26.2 in connection with any such claim.

D. In producing these documents, you are requested to furnish all documents known or available to you, including all documents in your custody or control, or in the custody or control of your officers, directors, agents, employees, representatives, consultants, investigators, or their attorneys or their agents, employees, representatives or investigators.

E. If a document is responsive to a request for production and is in your control, but not in your possession or custody, identify the person with possession or custody.

F. In the event that any document called for by this request has been destroyed or discarded, that document should be identified by (i) any addressor or addressee; (ii) any indicated or blind copies; (iii) the document's date, subject matter, number of pages, and any attachments or appendices, (iv) its date of destruction or discard, and the reason for same; (v) if destroyed or discarded, the persons responsible for carrying out such destruction or discard; and (vi) whether any copies of the document presently exist, and if so, in whose possession.

G. In the event a document is not produced on grounds other than privilege, state the type of document, date, author or addressor, addressee of all copies, recipients of all copies, title, the present location or address of the custodian of all copies, the substance of the content thereof, and state the reasons for its non-production.

H. This request for production shall be deemed continuing, and requires further supplemental production if you receive or discover additional documents after responding to this request.

### REQUESTS FOR PRODUCTION

1. All documents within your possession, custody or control concerning DeCSS.
2. All documents reflecting how you first became aware of the existence of DeCSS.
3. All documents concerning your use of DeCSS.
4. All documents concerning any other person's use of DeCSS.
5. All documents concerning the use of DeCSS by any person for purposes other than to decrypt a DVD, including but not limited to, any documents concerning the use of DeCSS for research, study or reverse-engineering.
6. All documents concerning internet locations where DeCSS is, or was, available.
7. All documents concerning communications relating to internet locations where DeCSS is, or was, available.

8. All documents concerning any efforts to encourage or solicit any person to make DeCSS available on the internet.

9. All documents concerning communications sent to, or received from, any person concerning the MPAA, CSS, DeCSS, this litigation, the Connecticut Action, the Santa Clara Action, or the Norway Action, including but not limited to e-mail communications and archived discussions in "chat rooms" or any other electronic forum.

10. All documents concerning the Declaration, including all drafts of the Declaration, all notes and correspondence relating to the Declaration, and all documents reviewed in connection with its preparation.

11. All documents concerning, demonstrating, supporting, or detracting from, any statement in the Declaration.

12. All documents concerning communications between or among you and any parties to this action, including but not limited to, communications with defendants' counsel.

13. All documents concerning communications between or among you and any owners, employees, agents, parents, subsidiaries, and/or other individuals associated with the 2600 Organizations, concerning the MPAA, CSS, DeCSS, this litigation, the Connecticut Action, the Santa Clara Action, or the Norway Action.

14. All documents that you may rely on if you are called as a witness at trial in this action.

15. All documents reviewed in preparation for your deposition in this action.
16. All documents concerning encryption, security or other access- or copy-control systems that have been hacked, cracked or reverse-engineered.
17. All documents reflecting communications concerning encryption, security or other access- or copy-control systems that have been hacked, cracked or reverse-engineered.
18. A list of all publications that you authored in the past ten years.
19. Copies of all publications that you authored relating to any statements in the Declaration, or otherwise relating to this action.
20. All documents concerning compensation that you received or will receive in connection with this action, including, but not limited to, compensation for the preparation of the Declaration or for appearing at a deposition or trial.
21. A list of all other legal proceedings in which you have testified as an expert at trial or by deposition.
22. All documents concerning any incidents in which you have been accused of violating any person's intellectual property rights.
23. All documents concerning technology for the compression of video signals.

24. All documents concerning statements you have made to the press or media relating to copyrights, intellectual property rights, or free access to copyrighted materials, including, but not limited to, all reports, articles and publications containing your statements on these subjects.

25. All documents concerning the feasibility of transmitting video on the internet.

26. All documents concerning the trafficking or feasibility of trafficking of movies on the internet.



Issued by the  
UNITED STATES DISTRICT COURT

DISTRICT OF MassachusettsUNIVERSAL CITY STUDIOS, INC., et al.,

Plaintiffs,

V.

SHAWN C. REIMERDES, et al.,

Defendants.

## SUBPOENA IN A CIVIL CASE

CASE NUMBER: 00 Civ. 0277 (LAK)  
(In the Southern District  
of New York)

TO: Harold Abelson  
NE43 - 429

Computer Sciences and Engineering Dept.

Massachusetts Institute of Technology, 77 Massachusetts Ave. Cambridge, MA

☐ YOU ARE COMMANDED to appear in the United States District Court at the place, date, and time specified below to testify in the above case.

PLACE OF TESTIMONY

COURTROOM

DATE AND TIME

☒ YOU ARE COMMANDED to appear at the place, date, and time specified below to testify at the taking of a deposition in the above case.

PLACE OF DEPOSITION

United States Courthouse  
District Court of Massachusetts  
1 Courthouse Way, Boston, MA 02210

DATE AND TIME

July 5, 2000  
10 a.m.

☒ YOU ARE COMMANDED to produce and permit inspection and copying of the following documents or objects at the place, date, and time specified below (list documents or objects):

See Schedule A attached.

PLACE

United States Courthouse  
District Court of Massachusetts  
1 Courthouse Way, Boston, MA 02210

DATE AND TIME

June 26, 2000  
10:00 a.m.

☐ YOU ARE COMMANDED to permit inspection of the following premises at the date and time specified below.

PREMISES

DATE AND TIME

Any organization not a party to this suit that is subpoenaed for the taking of a deposition shall designate one or more officers, directors, or managing agents, or other persons who consent to testify on its behalf, and may set forth, for each person designated, the matters on which the person will testify. Federal Rules of Civil Procedure, 30(b)(6).

ISSUING OFFICER SIGNATURE AND TITLE (INDICATE IF ATTORNEY FOR PLAINTIFF OR DEFENDANT)

DATE

Attorney for Plaintiffs

June 21, 2000

ISSUING OFFICER'S NAME, ADDRESS AND PHONE NUMBER

William Hart, Esq., (212) 969-3095

Proskauer Rose LLP, 1585 Broadway, New York, New York, 10036

(See Rule 45, Federal Rules of Civil Procedure)

If action is pending in district other than district of issuance, state district under case

AW

**EXHIBIT**

Abelson

Jk 7/5/00

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## SCHEDULE A

### DEFINITIONS

- A. Southern District of New York Local Civil Rule 26.3 governing Uniform Definitions in Discovery Requests is incorporated herein by reference, and all terms used herein shall be defined as set forth and construed therein, except where otherwise expressly indicated.
- B. “2600” shall mean the defendant, 2600 Enterprises, Inc. a/k/a “2600 Magazine,” its predecessors and successors, its present or former officers, employees, directors, representatives, agents, attorneys and assigns, and its affiliates, subsidiaries, parent or controlling corporations and their affiliates and subsidiaries, or any entity through which it conducts business, either alone or jointly with others.
- C. The “**2600.com Site**” shall refer to the web site operated by Defendants at <http://www.2600.com>, or any other site owned or operated by the Defendants, including all subdirectories and all pages and files presently or previously available for viewing or download at the site.
- D. The “**2600 Organizations**” shall refer to any and all organizations of “hackers,” other than Defendants, adopting the word “2600” as part of their name.
- E. “**2600, The Hacker Quarterly**” shall refer to the print magazine published by Defendants.
- F. “**Communicate,**” “**communicated,**” or “**communication**” means any act or instance of transferring, transmitting, passing, delivering or giving information, in the form of facts, ideas, inquiries, or otherwise, by oral, written, electronic, or any other means.

- G. The "**Connecticut Action**" shall refer to the action entitled *Universal City Studios, Inc., et al. v. Hughes*, filed in the United States District Court for the District of Connecticut on January 14, 2000, Case Number 300CV72 RNC.
- H. "**Corley**" shall mean the defendant, Eric Corley a/k/a "Emmanuel Goldstein".
- I. "**CSS**" shall mean the proprietary copy protection and access control system developed by Matsushita Electric Industrial Co., Ltd. and Toshiba Corporation, known as the Contents Scramble System.
- J. "**DeCSS**" shall mean the DVD decryption utility commonly known as DeCSS which has the purpose and function of circumventing CSS or the protection afforded by CSS, and shall include both the compiled object code and source code of DeCSS.
- K. "**Defendants**" shall mean Eric Corley a/k/a "Emmanuel Goldstein" ("Corley") and 2600 Enterprises, Inc. a/k/a "2600 Magazine" ("2600"), as defined herein.
- L. The term "**document**" is used herein in the broadest possible sense and shall mean any written, graphic or other recorded (whether visually, electronically, magnetically or otherwise) matter of whatever kind or nature or any other means of preserving thought or expression and all tangible things from which information can be processed, transcribed or retrieved, whether originals, copies or drafts (including, without limitation, nonidentical copies), however produced or reproduced (including but not limited to audiotapes, videotapes, CD-ROMs, e-mails, and computer files). A document with handwritten, typewritten or other recorded notes, editing marks, etc., is not and shall not be deemed identical to one without such modifications, additions, or deletions. The term "original" includes the file copy or copies of any document if there is no actual original or

ribbon copy. Designated documents shall mean originals in each instance (or copies thereof if originals are unavailable), regardless of origin or location, which are in your possession, custody, or control, or in the possession, custody, or control of your agents, representatives, employees, or counsel, and any copies or reproductions that differ in any respect from the original, such as copies containing marginal notations or other variations. Designated documents are to be taken as including all attachments, exhibits, enclosures, appendices and other documents that relate to or refer to such designated documents. The enumeration of various specific items as included within the definition of the word "document" shall not be taken to limit the generality of this word, and the requests herein are directed and intended to obtain all "documents" in the broadest and most comprehensive sense and meaning of this word.

- M. "Hyperlink" shall mean software instructions which, when executed, cause a signal to be sent to another location where data or material can be retrieved for viewing, copying or further transmission.
- N. "Motion Pictures" shall mean any cinematographic works released on DVD in which Plaintiffs hold a copyright interest.
- O. The "MPAA" shall mean the Motion Picture Association of America and any of its members, including each of the Plaintiffs.
- P. The "Norway Action" shall mean any investigation, criminal prosecution or civil action commenced or contemplated by the government of Norway concerning CSS, DeCSS, or any efforts to circumvent the encryption of DVDs.

- Q. **"Person"** or **"persons"** shall mean individuals, corporations, proprietorships, partnerships, firms, associations, joint ventures, banks, any government or governmental bodies, commissions, boards or agencies, and all other legal entities, and if appropriate or indicated, divisions, subsidiaries or departments of corporations or other entities, and their principals, agents, representatives, officers or employees.
- R. **"Plaintiffs"** shall mean Universal City Studios, Inc.; Paramount Pictures Corporation; Metro-Goldwyn-Mayer Studios Inc.; TriStar Pictures, Inc.; Columbia Pictures Industries, Inc.; Time Warner Entertainment Co., L.P.; Disney Enterprises, Inc.; and Twentieth Century Fox Film Corporation, and shall include their agents, representatives, attorneys, and all persons acting on their behalf.
- S. The **"Santa Clara Action"** shall refer to the action entitled *DVD Copy Control Association, Inc. v. McLaughlin, et al.*, filed in the Superior Court of California, Santa Clara County, on December 27, 1999, Case Number CV 786804.
- T. The **"Declaration"** shall refer to the Declaration of Harold Abelson In Opposition to Plaintiffs' Motion To Modify the Preliminary Injunction And In Support of Defendants' Cross-Motion To Vacate the Preliminary Injunction, dated April 26, 2000.

### **INSTRUCTIONS**

- A. You shall respond to each of the following requests in full to the best of your ability and shall specify which documents and things are responsive to each individual request.
- B. Documents shall be provided in the form in which they are normally kept. All documents that consist of or contain information in electronic or digital form, however, shall



be provided on one or more 3.5-inch floppy disks, digital audio tapes ("DATs"), Zip or Jazz cartridges, DVDs, or CD-ROMs unless agreed otherwise.

C. If any responsive document is withheld under a claim of privilege, or for any other reason, you are requested to provide the information set forth in FRCP 26(b)(5) and Southern District of New York Local Rule 26.2 in connection with any such claim.

D. In producing these documents, you are requested to furnish all documents known or available to you, including all documents in your custody or control, or in the custody or control of your officers, directors, agents, employees, representatives, consultants, investigators, or their attorneys or their agents, employees, representatives or investigators.

E. If a document is responsive to a request for production and is in your control, but not in your possession or custody, identify the person with possession or custody.

F. In the event that any document called for by this request has been destroyed or discarded, that document should be identified by (i) any addressor or addressee; (ii) any indicated or blind copies; (iii) the document's date, subject matter, number of pages, and any attachments or appendices, (iv) its date of destruction or discard, and the reason for same; (v) if destroyed or discarded, the persons responsible for carrying out such destruction or discard; and (vi) whether any copies of the document presently exist, and if so, in whose possession.

G. In the event a document is not produced on grounds other than privilege, state the type of document, date, author or addressor, addressee of all copies, recipients of all copies, title, the present location or address of the custodian of all copies, the substance of the content thereof, and state the reasons for its non-production.



H. This request for production shall be deemed continuing, and requires further supplemental production if you receive or discover additional documents after responding to this request.

### **REQUESTS FOR PRODUCTION**

1. All documents within your possession, custody or control concerning DeCSS.
2. All documents reflecting how you first became aware of the existence of DeCSS.
3. All documents concerning your use of DeCSS.
4. All documents concerning any other person's use of DeCSS.
5. All documents concerning the use of DeCSS by any person for purposes other than to decrypt a DVD, including but not limited to, any documents concerning the use of DeCSS for research, study or reverse-engineering.
6. All documents concerning internet locations where DeCSS is, or was, available.
7. All documents concerning communications relating to internet locations where DeCSS is, or was, available.

8. All documents concerning any efforts to encourage or solicit any person to make DeCSS available on the internet.

9. All documents concerning communications sent to, or received from, any person concerning the MPAA, CSS, DeCSS, this litigation, the Connecticut Action, the Santa Clara Action, or the Norway Action, including but not limited to e-mail communications and archived discussions in "chat rooms" or any other electronic forum.

10. All documents concerning the Declaration, including all drafts of the Declaration, all notes and correspondence relating to the Declaration, and all documents reviewed in connection with its preparation.

11. All documents concerning, demonstrating, supporting, or detracting from, any statement in the Declaration.

12. All documents concerning communications between or among you and any parties to this action, including but not limited to, communications with defendants' counsel.

13. All documents concerning communications between or among you and any owners, employees, agents, parents, subsidiaries, and/or other individuals associated with the 2600 Organizations, concerning the MPAA, CSS, DeCSS, this litigation, the Connecticut Action, the Santa Clara Action, or the Norway Action.

14. All documents that you may rely on if you are called as a witness at trial in this action.

15. All documents reviewed in preparation for your deposition in this action.
16. All documents concerning encryption, security or other access- or copy-control systems that have been hacked, cracked or reverse-engineered.
17. All documents reflecting communications concerning encryption, security or other access- or copy-control systems that have been hacked, cracked or reverse-engineered.
18. A list of all publications that you authored in the past ten years.
19. Copies of all publications that you authored relating to any statements in the Declaration, or otherwise relating to this action.
20. All documents concerning compensation that you received or will receive in connection with this action, including, but not limited to, compensation for the preparation of the Declaration or for appearing at a deposition or trial.
21. A list of all other legal proceedings in which you have testified as an expert at trial or by deposition.
22. All documents concerning any incidents in which you have been accused of violating any person's intellectual property rights.
23. All documents concerning technology for the compression of video signals.

24. All documents concerning statements you have made to the press or media relating to copyrights, intellectual property rights, or free access to copyrighted materials, including, but not limited to, all reports, articles and publications containing your statements on these subjects.

25. All documents concerning the feasibility of transmitting video on the internet.

26. All documents concerning the trafficking or feasibility of trafficking of movies on the internet.

Leo P. Gold (LG-1434)  
 William M. Hart (WH-1604)  
 PROSKAUER ROSE LLP  
 1585 Broadway  
 New York, New York 10036  
 (212) 969-3000 Telephone  
 (212) 969-2900 Facsimile

Jon A. Baumgarten (pro hac vice)  
 PROSKAUER ROSE LLP  
 1233 20<sup>th</sup> Street N.W., Suite 800  
 Washington, DC 20036-2396  
 (202) 416-6800 Telephone  
 (202) 416-6899 Facsimile

Attorneys for Plaintiffs

UNITED STATES DISTRICT COURT  
 SOUTHERN DISTRICT OF NEW YORK

UNIVERSAL CITY STUDIOS, INC.,  
 PARAMOUNT PICTURES CORPORATION,  
 METRO-GOLDWYN-MAYER STUDIOS INC.,  
 TRISTAR PICTURES, INC.,  
 COLUMBIA PICTURES INDUSTRIES, INC.,  
 TIME WARNER ENTERTAINMENT CO., L.P.,  
 DISNEY ENTERPRISES, INC., and  
 TWENTIETH CENTURY FOX FILM  
 CORPORATION,

Plaintiffs,

- against -

SHAWN C. REIMERDES, ERIC CORLEY  
 a/k/a "EMMANUEL GOLDSTEIN"  
 and ROMAN KAZAN,

Defendants

00 Civ. 0277 (LAK)

DECLARATION OF  
 MICHAEL I. SHAMOS

I, MICHAEL I. SHAMOS, declare under penalty of perjury that the following is true and correct:

1. My name is Michael I. Shamos. I am a faculty member in the School of Computer Science at Carnegie Mellon University and serve as Co-Director of the Institute for eCommerce at Carnegie Mellon. I teach courses in eCommerce Technology, Electronic

Payment Systems and Internet Law and Regulation. In these courses I give lectures on compression technology and broadband networks. My resume is attached as an exhibit hereto.

2. I am also an intellectual property attorney admitted to practice before the United States Patent and Trademark Office. I was admitted to the bar in 1981 and am a partner in the Webb Law Firm, the largest intellectual property practice in Pittsburgh, Pennsylvania. On May 18, 2000 I gave the keynote address to the American Intellectual Property Law Association's Spring Meeting entitled "Digital Property in the 21<sup>st</sup> Century."

3. I was engaged by Proskauer Rose LLP, counsel for plaintiffs in this case, to conduct certain experiments to investigate the feasibility of obtaining DVD decryption software (DeCSS), using that software to decrypt commercial DVDs, converting the decrypted videos to DivX format and transferring those DivX files between computers on local area networks.

4. In preparation for this experiment, I purchased a new laptop computer, specifically a Sony VAIO PC-XG18 (650 MHz) with 128 megabytes of RAM, 18 gigabytes of hard disk and a CD/DVD drive running Windows 98. I also purchased a commercial copy of the DVD of the movie "Sleepless in Seattle."

5. At all material times the Sony Computer was connected to a local area network at Carnegie Mellon University, through which Internet access was obtained. Except where noted herein, the bandwidth of the CMU network is 10 megabits per second. This network extends to faculty and student offices and dormitory rooms.

6. All of the activities described herein were performed by me personally or Carnegie Mellon staff members acting at my direction and supervision.

7. We obtained the following accessory programs from the Internet: WinZip 8.0 (for compressing and decompressing files), LeechFTP 207 (for transferring files over the Internet) and mIRC 3.71 (for engaging in Internet Relay Chat sessions).

8. We "visited" the website 2600.com and consulted the "archives" section thereof to obtain a link to a site where a copy of the DeCSS software might be found. The 2600.com page contains links to numerous web pages at which the DeCSS software may be found. We followed the following link: <http://home.rmci.net/bert/fuckthelawyers> ("rmci").

9. The rmci link displayed a page containing a link which when clicked caused a file named DeCSS.zip to be downloaded to the Sony computer. This process took 27 seconds.

10. Using the WinZip 8.0 program, we decompressed the DeCSS.zip file into a temporary directory, which yielded the executable file DeCSS.exe and two dynamic link



library (DLL) files, wnaspi32.w2k.dll and wnaspi32.w98.dll. The dynamic link library - wnaspi32.w2k.dll is necessary to run DeCSS under Windows 2000.

11. We inserted the "Sleepless in Seattle" DVD into the DVD drive of the Sony computer and ran the DeCSS program. This resulted in multiple .VOB files comprising decrypted video of the movie. We then removed the DVD from the DVD drive and were able to view the movie using the standard Windows Media player without further processing. This demonstrates that the DeCSS program successfully decrypted the DVD and copied it to the Sony hard drive.

12. Windows 98 imposes a limit on the length of disk files. Because decrypted DVD files are very large (greater than 5 gigabytes) we decided to do further experiments using Windows 2000 to remove the size restriction.

13. We therefore installed a "clean" Windows 2000 installation in which the hard drive was reformatted so as to leave no files remaining from the prior Windows 98 installation. We copied the file wnaspi32.w2k.dll to directory c:\winnt\system32 as wnaspi32.dll

14. We repeated all of the above steps and ran DeCSS again. It located 10 files on the DVD, five of which had the extension .VOB. We clicked the button on the DeCSS window labeled "Merge VOB files," This resulted in a single large .VOB file. We successfully played this file using Media Player to view "Sleepless in Seattle" (in this case with one of the alternate soundtracks) without the DVD inserted in the DVD drive.

15. We next converted the .VOB file to DivX, a highly compressed video format designed so that a DVD movie can be stored on a single CD-ROM having capacity limited to 650 megabytes.

16. We followed these steps:

- a. We loaded the program mIRC, visited #divx by typing /join #divx. The #divx channel topic was "visit our home page at <http://fm4.org>." We did so.
- b. The page has a "Tutorial" section and a "Guide to Fixing Desynch." We downloaded all required programs as specified on the page.
- c. We followed all specified instructions to the letter.

17. For the DeCSSed movie "Sleepless In Seattle," this procedure produced a badly desynchronized DivX file, in which the audio was not properly timed to the video. However, the #divx site contains instructions for repairing this problem.

18. We removed the opening trailer of the film to assist in the synchronization process and performed the fixes as described in the "Guide to Fixing Desynch."

19. The result of this process was a successfully synchronized copy of a DivX for the film "Sleepless in Seattle" (in this case with the standard default soundtrack).

20. To obtain a DivX of a different movie from the Internet, we went to Internet Relay Chat and joined to #divx again under the name VaioBoy. We offered to trade "Sleepless

In Seattle for other movies." "[REDACTED]" offered to trade with us. Here is the chat log that resulted from this session:

Session Start: Tue Jun 27 23:15:45 2000

Session Ident: [REDACTED]

<VaioBoy> anyone have any divxes to trade for sleepless in seattle?

<[REDACTED]> sure..... army of darkness, entrapment, the matrix, the rock, fight club(2cd set), the professional, cruel intentions, half-baked

<VaioBoy> oh wow

<VaioBoy> lemme see

<VaioBoy> fight club is 2 cds? Is there a 1cd rip out there?

<VaioBoy> actually the matrix sounds great

<VaioBoy> where do you want me to send sleepless?

<[REDACTED]> i dunno if fight club is on 1 cd..

<[REDACTED]> but it's 2x the quality

<[REDACTED]> lemme just make you an acct on my ftp.

<[REDACTED]> do you have an ftp??

<VaioBoy> nope, but I can upload

<VaioBoy> I don't suppose you could install serv-u?

<[REDACTED]> you can upload and download ;-) cause that's where the matrix is :)

<[REDACTED]> i have an ftp.. lemme make you an acct.

<[REDACTED]> 1sec.

<[REDACTED]> do you have a static ip???

<VaioBoy> yep

<[REDACTED]> k

<VaioBoy> hold on, lemme switch over to that

<VaioBoy> I have two net interfaces

<VaioBoy> I'll be back on irc in just a minute

<[REDACTED]> just what is it?

<[REDACTED]> ok

<VaioBoy> 128.2.179.23

<[REDACTED]> k

<VaioKid> ok fixed

<[REDACTED]> k

<[REDACTED]> do you have ICQ??

<VaioKid> nope

<VaioKid> I hate that program :)

<[REDACTED]> k

<VaioKid> so where should I connect to?

<VaioKid> if you will permit 2 logins, I can upload and download simultaneously.

<VaioKid> I have enough bandwidth that there shouldn't be a problem..

<[REDACTED]> you're gonna have to wait a minute..

<[REDACTED]> i'm moving the matrix into the ftp hdd at the moment.

<VaioKid> awesome

<VaioKid> thanks man

<VaioKid> you want me to start upping now?

[REDACTED] yeah.. sure  
<VaioKid> ok, where do I connect to?  
[REDACTED] sorry  
[REDACTED] :)  
<VaioKid> np :)  
[REDACTED] 24.8.102.212:21 vaioboy / vaioboy  
<VaioKid> holy shit  
<VaioKid> we are getting pretty good rates  
[REDACTED] yeap.  
<VaioKid> thanks again man  
[REDACTED] ap  
<VaioKid> I'll upload more if I come across anything you don't have  
[REDACTED] ok  
[REDACTED] i think i wanna start a trading club.  
[REDACTED] of just DivX's.  
<VaioKid> that would be really cool  
<VaioKid> I have enough bandwidth to courier things  
[REDACTED] i've just ordered a 60gig hdd.  
<VaioKid> how much did you pay for that?  
[REDACTED] 265  
<VaioKid> shit  
<VaioKid> maxtor?  
[REDACTED] yeap  
<VaioKid> I'm going to get the IBM 75  
<VaioKid> just because it's 7200 RPM  
[REDACTED] that's too much : )  
<VaioKid> haha  
<VaioKid> NEVER!  
[REDACTED] 5400 is just fine  
<VaioKid> well  
<VaioKid> My 9gig cheetah will still smoke it  
[REDACTED] i've only got 800 bucks to last me until september : )  
<VaioKid> but that's ok, it's to store movies anyway.  
<VaioKid> ok man  
[REDACTED] that's what my 60gig is going to be for.. just movies.  
<VaioKid> I am going to go code for a while  
<VaioKid> thanks again  
[REDACTED] k. np  
<VaioKid> msg me sometime if you want anything  
<VaioKid> vaiokid/boy  
[REDACTED] alright

Session Close: Tue Jun 27 23:42:21 2000

21. We thus obtained a free copy of the DivX for the film "The Matrix" by trading a copy of "Sleepless in Seattle." Using basic cable modem service (approximately 640

kilobits per second), it took about 6 hours to download the DivX. The quality of the video was substantially better than VHS tape but not quite as good as a DVD.

22. We then conducted further experiments to determine how long it would take to share the DivX of "The Matrix" with others. Using a 10 megabit LAN, the file transfer took less than 20 minutes. Using a 100 megabit LAN available at Carnegie Mellon, the transfer of the compressed DivX of "The Matrix" was accomplished in three minutes.

23. There are over 1 million Internet hosts in the .EDU domain, indicating educational institutions. Most large universities maintain 10 megabit LANs. It is therefore my conservative estimate that at least one million university students and faculty around the world presently have the capability to transfer and share DivX files of feature-length movies in less than 20 minutes. Home cable modems are widely available that support transmission at up to 10 megabits per second.

24. Nortel Networks offers transmission technology that achieves bandwidth exceeding 1 megabit per second to the home over ordinary AC power lines.

25. Internet 2 is designed to run at 1 gigabit per second. It is currently deployed at several universities. At that speed it would take less than 1 minute to download a two-hour DivX file. An entire uncompressed DeCSSed DVD could be transferred in less than 10 minutes.

26. At a recent Gigabit Ethernet conference, discussion was held of a standard for a 10-gigabit transmission. At that bandwidth an entire DivX movie could be transmitted in a few seconds.

27. It is my opinion that using the DeCSS utility obtained through links from defendant Corley's website, 2600.com, it would straightforward for a knowledgeable user of the Internet to produce on his own hard drive a permanent unencrypted versions of protected movie DVDs.

28. It is my opinion that a user of the Internet with a degree of video expertise can easily locate and obtain software to transform a DeCSSed DVD into compressed DivX format and run correction software to resynchronize the audio and video.

29. It is my opinion that DivX movie files can be readily transferred and exchanged over the Internet and can be used to trade for other DivX movie files without the need to exchange any money.

30. It is my opinion that on mid- and large-sized college campuses in the United States, anyone with access to these networks, including students, can currently transmit DivX movie files within the same campus network in less than 20 minutes.

*10 min DeCSS — 100 seconds*



31. Available bandwidth has been increasing in the United States at a rate 5-10 times that of CPU processor speeds. Processors are currently doubling in speed approximately every 18 months.

32. Compression technology is constantly improving. Using MPEG4, it is possible to watch a DivX movie in full motion at a bandwidth of 858 kilobits per second, lower than T1 bandwidth..

33. I hold the opinions expressed herein to a reasonable degree of professional certainty.

Dated: June 30, 2000  
Pittsburgh, Pennsylvania

Michael Ben Shaug

